

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. – 20. (Canceled)

21. (Currently Amended) A method to identify outside-in or inside-out ~~signaling~~ integrin mediated signaling by an integrin selected from the group consisting of $\beta 3$, $\beta 5$, $\beta 6$, $\beta 7$ and $\beta 8$ comprising the step of determining whether the cytoplasmic domain of ~~said~~ the β subunit of an integrin is phosphorylated, wherein the β subunit does not contain an ITAM motif, wherein a phosphorylated cytoplasmic domain of the β subunit of the integrin indicates integrin-mediated outside-in or inside-out signaling.

22. (Currently Amended) The method of claim 21 comprising the steps of~~[[;]]~~:

- a) preparing an extract of a cell expressing an integrin ~~of claim 21~~ β subunit, and
- b) electrophoresing the extract using SDS electrophoresis, and
- c) analyzing said extract the electrophoresed sample to determine whether the tyrosine residues in the cytoplasmic domain of the β subunit of said integrin ~~is~~ are phosphorylated.

23. (Currently Amended) The method of claim 22 wherein an anti-phosphotyrosine antibody is used in the analysis step ~~[[b]]~~ c.

24. – 29. (Canceled)

30. (Previously Presented) The method of claim 22 wherein the extract is prepared with a high concentration of SDS.

31. (Canceled)

32. (Currently Amended) The method of claim ~~31~~ 22 wherein the electrophoresis is 2D electrophoresis.

33. (Previously Presented) The method of claim 22 wherein the cell is a tumor cell.

34. (Previously Presented) The method of claim 33 wherein the tumor cell is a carcinoma cell.

35. (Previously Presented) The method of claim 22 wherein the cell is a platelet.

36. (Previously Presented) The method of claim 22 wherein the cell is an immune system cell.

37. (Previously Presented) The method of claim 36 wherein the immune system cell is selected from the group consisting of: a lymphocyte, a leukocyte, a monocyte, a macrophage, a granulocyte, a natural killer cell, and a neutrophil.

38. (Previously Presented) The method of claim 22 wherein the cell is an epithelial cell.

39. (Previously Presented) The method of claim 38 wherein the epithelial cell is a keratinocyte.

40. (Previously Presented) The method of claim 22 wherein the cell is a fibroblast.

41. (New) The method of claim 22, wherein the cell expresses a β subunit of an integrin selected from the group consisting of $\beta 3$ integrin, $\beta 5$ integrin, $\beta 6$ integrin, $\beta 7$ integrin, and $\beta 8$ integrin.

42. (New) The method of claim 22, wherein the cytoplasmic domain of the β subunit of the integrin is selected from the group consisting of the cytoplasmic domain of $\beta 3$ integrin (SEQ ID NO:16), the cytoplasmic domain of $\beta 5$ integrin (SEQ ID NO:19), the cytoplasmic domain of $\beta 6$ integrin (SEQ ID NO:17), and the cytoplasmic domain of $\beta 7$ integrin (SEQ ID NO:21).

43. (New) A method to identify outside-in or inside-out integrin mediated signaling comprising the step of determining whether a tyrosine residue in the cytoplasmic domain of $\beta 3$ integrin (SEQ ID NO:16) is phosphorylated, wherein a phosphorylated tyrosine residue in the cytoplasmic domain of $\beta 3$ integrin indicates integrin-mediated outside-in or inside-out signaling.

44. (New) The method of claim 43, comprising the steps of:

- a) preparing an extract of a cell expressing $\beta 3$ integrin in a high concentration of SDS;
- b) performing 2D electrophoresis on the extract; and
- c) analyzing the electrophoresed extract with an anti-phosphotyrosine antibody to determine whether a tyrosine residue in the cytoplasmic domain of $\beta 3$ integrin is phosphorylated.